

CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

Claim 1. (Currently Amended): A rotary edging wheel for rough cutting of an optical lens, comprising:

a hub portion operable for attachment to a rotary power source, wherein said hub portion includes a substantially solid body member;

an outer circumferential rough cutting surface having a width, wherein said surface is adjacent to said body member, said surface including an abrasive grit attached thereto, wherein said abrasive grit is operable for rough cutting of the optical lens, wherein said abrasive grit is present at a substantially level depth across the width of said surface; and

at least one pair of substantially adjacent swarf clearing grooves formed in said surface, comprising:

a first swarf clearing groove extending at an angle across said surface; and

a second swarf clearing groove extending at an angle across said surface;

wherein said first and second swarf clearing grooves are angled either towards each other or away from each other and extend continuously across said surface;

wherein said first and second swarf clearing grooves are operable to remove swarf during a rough cutting operation of the optical lens.

Claim 2. (Withdrawn): The invention of claim 1, further comprising a plurality of pairs of substantially adjacent swarf clearing grooves formed in said surface.

Claim 3. (Original): The invention of claim 1, wherein each groove has an angle of from about 10 degrees to about 80 degrees.

Claim 4. (Original): The invention of claim 1, wherein each groove has an angle of from about 15 degrees to about 65 degrees.

Claim 5. (Original): The invention of claim 1, wherein each groove has an angle of from about 35 degrees to about 45 degrees.

Claim 6. (Original): The invention of claim 1, wherein said abrasive grit is attached to the wheel by brazing, electroplating, sintering or resin bonding.

Claim 7. (Original): The invention of claim 1, wherein said abrasive grit is comprised of diamond hardness grit.

Claim 8. (Withdrawn): A rotary edging wheel for rough cutting of an optical lens, comprising:

a hub portion operable for attachment to a rotary power source;

an outer circumferential rough cutting surface having a width, said surface including an abrasive grit attached thereto, wherein said abrasive grit is operable for rough cutting of the optical lens;

a first pair of substantially adjacent swarf clearing grooves formed in said surface, comprising first and second substantially parallel swarf clearing grooves extending at an angle across said surface; and

a second pair of substantially adjacent swarf clearing grooves formed in said surface, comprising third and fourth substantially parallel second swarf clearing grooves extending at an angle across said surface;

wherein said first and second pairs of swarf clearing grooves are angled either towards each other or away from each other and extend continuously across said surface.

Claim 9. (Withdrawn): The invention of claim 8, further comprising a plurality of pairs of substantially adjacent swarf clearing grooves formed in said surface.

Claim 10. (Withdrawn): The invention of claim 8, wherein each groove has an angle of from about 10 degrees to about 80 degrees.

Claim 11. (Withdrawn): The invention of claim 8, wherein each groove has an angle of from about 15 degrees to about 65 degrees.

Claim 12. (Withdrawn): The invention of claim 8, wherein each groove has an angle of from about 35 degrees to about 45 degrees.

Claim 13. (Withdrawn): The invention of claim 8, wherein said abrasive grit is attached to the wheel by brazing, electroplating, sintering or resin bonding.

Claim 14. (Withdrawn): The invention of claim 8, wherein said abrasive grit is comprised of diamond hardness grit.

Claim 15. (Currently Amended): A rotary edging wheel for polishing of an optical lens, comprising:

a hub portion operable for attachment to a rotary power source, wherein said hub portion includes a substantially solid body member;

an outer circumferential cutting surface having a width, wherein said surface is adjacent to said body member, said surface including an abrasive grit attached thereto, wherein said abrasive grit is operable for polishing of the optical lens, wherein said abrasive grit is present at a substantially level depth across the width of said surface;

and

at least one pair of substantially adjacent swarf clearing grooves formed in said surface, comprising:

a first swarf clearing groove extending at an angle across said surface; and

a second swarf clearing groove extending at an angle across said surface;

wherein said first and second swarf clearing grooves are angled either towards each other or away from each other and extend continuously across said surface;

wherein said first and second swarf clearing grooves are operable to remove swarf during a polishing cutting operation of the optical lens.

Claim 16. (Withdrawn): The invention of claim 15, further comprising a plurality of pairs of substantially adjacent swarf clearing grooves formed in said surface.

Claim 17. (Original): The invention of claim 15, wherein each groove has an angle of from about 10 degrees to about 80 degrees.

Claim 18. (Original): The invention of claim 15, wherein each groove has an angle of from about 15 degrees to about 65 degrees.

Claim 19. (Original): The invention of claim 15, wherein each groove has an angle of from about 35 degrees to about 45 degrees.

Claim 20. (Original): The invention of claim 15, wherein said abrasive grit is attached to the wheel by brazing, electroplating, sintering or resin bonding.

Claim 21. (Original): The invention of claim 15, wherein said abrasive grit is comprised of diamond hardness grit.

Claim 22. (Withdrawn): A rotary edging wheel for polishing of an optical lens, comprising:

a hub portion operable for attachment to a rotary power source;

an outer circumferential cutting surface having a width, said surface including an abrasive grit attached thereto, wherein said abrasive grit is operable for polishing of the optical lens;

a first pair of substantially adjacent swarf clearing grooves formed in said surface, comprising first and second substantially parallel swarf clearing grooves extending at an angle across said surface; and

a second pair of substantially adjacent swarf clearing grooves formed in said surface, comprising third and fourth substantially parallel second swarf clearing grooves extending at an angle across said surface;

wherein said first and second pairs of swarf clearing grooves are angled either towards each other or away from each other and extend continuously across said surface.

Claim 23. (Withdrawn): The invention of claim 22, further comprising a plurality of pairs of substantially adjacent swarf clearing grooves formed in said surface.

Claim 24. (Withdrawn): The invention of claim 22, wherein each groove has an angle of from about 10 degrees to about 80 degrees.

Claim 25. (Withdrawn): The invention of claim 22, wherein each groove has an angle of from about 15 degrees to about 65 degrees.

Claim 26. (Withdrawn): The invention of claim 22, wherein each groove has an angle of from about 35 degrees to about 45 degrees.

Claim 27. (Withdrawn): The invention of claim 22, wherein said abrasive grit is attached to the wheel by brazing, electroplating, sintering or resin bonding.

Claim 28. (Withdrawn): The invention of claim 22, wherein said abrasive grit is comprised of diamond hardness grit.

Claim 29. (Currently Amended): A method for rough cutting of an optical lens, comprising:

providing an edging wheel, comprising:

a hub portion operable for attachment to a rotary power source, wherein said hub portion includes a substantially solid body member;

an outer circumferential rough cutting surface having a width, wherein said surface is adjacent to said body member, said surface including an abrasive grit attached thereto, wherein said abrasive grit is operable for rough cutting of the optical lens, wherein said abrasive grit is present at a substantially level depth across the width of said surface; and

at least one pair of substantially adjacent swarf clearing grooves formed in said surface, comprising:

a first swarf clearing groove extending at an angle across said surface; and

a second swarf clearing groove extending at an angle across said surface;

wherein said first and second swarf clearing grooves are angled either towards each other or away from each other and extend continuously across said surface;

wherein said first and second swarf clearing grooves are operable to remove swarf during a rough cutting operation of the optical lens;

selectively rotating said edging wheel; and

bringing the optical lens into selective contact with said rotating edging wheel.

Claim 30. (Withdrawn): A method for rough cutting of an optical lens, comprising:

providing a rotary edging wheel, comprising:

a hub portion operable for attachment to a rotary power source;

an outer circumferential rough cutting surface having a width, said surface including an abrasive grit attached thereto, wherein said abrasive grit is operable for rough cutting of the optical lens;

a first pair of substantially adjacent swarf clearing grooves formed in said surface, comprising first and second substantially parallel swarf clearing grooves extending at an angle across said surface; and

a second pair of substantially adjacent swarf clearing grooves formed in said surface, comprising third and fourth substantially parallel second swarf clearing grooves extending at an angle across said surface and extend continuously across said surface;

wherein said first and second pairs of swarf clearing grooves are angled either towards each other or away from each other;

selectively rotating said edging wheel; and

bringing the optical lens into selective contact with said rotating edging wheel.

Claim 31. (Currently Amended): A method for polishing of an optical lens, comprising:

providing a rotary edging wheel, comprising:

a hub portion operable for attachment to a rotary power source, wherein said hub portion includes a substantially solid body member;

an outer circumferential cutting surface having a width, wherein said surface is adjacent to said body member, said surface including an abrasive grit attached thereto, wherein said abrasive grit is operable for polishing of the optical lens, wherein said abrasive grit is present at a substantially level depth across the width of said surface;

and

at least one pair of substantially adjacent swarf clearing grooves formed in said surface, comprising:

a first swarf clearing groove extending at an angle across said surface;

and

a second swarf clearing groove extending at an angle across said surface;

wherein said first and second swarf clearing grooves are angled either towards each other or away from each other and extend continuously across said surface;

wherein said first and second swarf clearing grooves are operable to remove swarf during a polishing operation of the optical lens;

selectively rotating said edging wheel; and

bringing the optical lens into selective contact with said rotating edging wheel.

Claim 32. (Withdrawn): A method for polishing an optical lens, comprising:

providing a rotary edging wheel, comprising:

a hub portion operable for attachment to a rotary power source;

an outer circumferential cutting surface having a width, said surface including an abrasive grit attached thereto, wherein said abrasive grit is operable for polishing of the optical lens;

a radially extending planar side portion;

a first pair of substantially adjacent swarf clearing grooves formed in said surface, comprising first and second substantially parallel swarf clearing grooves extending at an angle across said surface; and

a second pair of substantially adjacent swarf clearing grooves formed in said surface, comprising third and fourth substantially parallel second swarf clearing grooves extending at an angle across said surface;

wherein said first and second pairs of swarf clearing grooves are angled either towards each other or away from each other and extend continuously across said surface;

selectively rotating said edging wheel; and

bringing the optical lens into selective contact with said rotating edging wheel.